

Constructing and contesting veterinary expertise: Professionals, publics and prospects

Tuesday 5 July – Thursday 7 July 2022
Online conference

Convenors:

Professor Pru Hobson-West, University of Nottingham

Dr Alistair Anderson, University of Nottingham

Professor Kate Millar, University of Nottingham



This is an online conference with speakers presenting via Zoom webinar. All times shown in UK time.

Day 1: Tuesday 5 July 2022

12:30-13:00 Welcome and introduction by convenors

13:00-14:00 **Session 1: How is veterinary expertise changing?**

This session will draw on topic examples in order to reveal the distinct historical trajectory of the veterinary profession, having regularly needed to demarcate and defend a territory of expertise and professionalisation. Papers will reveal how science and humanities approaches show veterinary expertise as an unsettled site of social and cultural interest, incorporating contested professional identities, complex interpersonal politics, and a plurality of constructions of health and illness. These aspects of veterinary expertise are shaped by a number of variables including veterinary education, the varied contexts of veterinary practice, the heterogeneity of gender dynamics within the profession's various contexts, and perceptions of societal expectation.

Speakers in this session will deliver 15-minute presentations.

Dr Angela Cassidy (University of Exeter)

Dr Ludek Broz (Czech Academy of Sciences)

Dr Nicolas Fortané (INRAE, Paris-Dauphine University)

Dr Alison Skipper (King's College London)

14:00-14:15 Break

14:15-14:30 Chair reflections **Dr Robert Kirk** (University of Manchester)

14:30-15:00 Audience Q&A

15:00-15:15 Closing remarks **Professor Pru Hobson-West** (University of Nottingham)

15:15 End of Day 1

Day 2: Wednesday 6 July 2022

12:30-12:45 Welcome and introduction by convenors

12:45-13:45 **Session 2: How does veterinary expertise become contested?**

This second session will involve discussion of how veterinary expertise becomes contested. Veterinarians treat the companion animals of the general pet-owning public, work with farmers in agricultural businesses and scientists in animal research laboratories, and contribute to public health policies and interventions in government roles. As with the profession itself, these relationships are all historically contingent and contemporarily heterogeneous. Veterinary expertise often therefore involves contestation between veterinary professionals and other publics or novel technologies, but it can also involve contestation for professionals working across multiple jurisdictions or in socially-controversial areas. This session unpacks some of the various ways in which veterinary expertise becomes contested, and how social research can illuminate these contestations and the relationships that give rise to them.

Speakers in this session will deliver 15-minute presentations.

Dr Alistair Anderson (University of Nottingham)

Dr Jenny Vermilya (University of Colorado)

Dr Gareth Enticott (Cardiff University)

Professor Pru Hobson-West (University of Nottingham)

13:45-14:00 Break

14:00-14:15 Chair reflections **Professor Melanie Rock** (University of Calgary)

14:15-14:45 Audience Q&A

14:45-15:00 Break

Day 2: Wednesday 6 July 2022 (Continued)

15:00-16:00	<p>Session 3: What ethical dilemmas emerge from contested veterinary expertise?</p> <p>Session three will explore the significant ethical challenges that are created when veterinary expertise is contested. Veterinarians routinely deal with dilemmas and many of these are not commonly faced in human medical care, such as the euthanasia decision-making of conflicted pet-owners or the financial/welfare compromises of agricultural business. These decisions are further complicated by the triadic relationship between the veterinarian, their non-human animal patient, and their human client. The papers and discussion in this theme will reflect on how veterinary ethical dilemmas can be examined through insights from social sciences and humanities, and whether lessons can be identified for ethical challenges in the human medical field.</p> <p>Speakers in this session will deliver 15-minute presentations.</p> <p>Dr Svenja Springer (University of Veterinary Medicine, Vienna)</p> <p>Dr Franck Meijboom (Utrecht University)</p> <p>Dr Carol Gray (Hartpury University)</p> <p>Professor Kate Millar (University of Nottingham)</p>
16:00-16:15	Break
16:15-16:30	Chair reflections Professor Raymond Anthony (University of Alaska)
16:30-17:00	Audience Q&A
17:00-17.15	Closing remarks, conference convenors
17:15	End of day 2

Day 3: Thursday 7 July 2022

12:30-12:45	Welcome and introduction by convenors
12:45-13:45	<p>Session 4: What are the prospects for social research into veterinary expertise?</p> <p>The fourth and final theme reflects on the implications of doing social research on veterinary expertise and the prospects for the development of the nascent field of veterinary humanities. By way of comparison, the medical humanities are well-developed as an interdisciplinary field with academic infrastructures and routes to impact. This session will challenge participants to consider whether and how the veterinary humanities could replicate these contributions, or indeed whether the veterinary humanities should have distinct aspirations from the medical humanities.</p> <p>Speakers in this session will deliver 15-minute presentations.</p> <p>Professor Jane Desmond (University of Illinois at Urbana-Champaign)</p> <p>Dr Kerstin Weich (University of Vienna)</p> <p>Dr Lisa Moses (Centre for Bioethics, Harvard Medical School)</p> <p>Professor Melanie Rock (University of Calgary)</p>
13:45-14:00:	Break
14:00-14:15	Chair reflections Professor Abigail Woods (University of Lincoln)
14:15-14:45	Audience Q&A
14:45-15:00	Conference conclusion, convenors
15:00	End of day 3
15:15-16:30	<p>Informal networking (optional)</p> <p>The convenors will host a separate online space for informal discussion and networking at the end of the conference. This will be optional and separate to the main conference event.</p>

Conference Paper Abstracts

Day 1: 13:00-14:00 Session 1: How is veterinary expertise changing?

Dr Ludek Broz (Czech Academy of Sciences)

Veterinarization of Society: the paradox of marginal vets and all-powerful veterinary expertise

We suggest that bio-veterinary medicine exercises increasing global influence over human and animal lives and propose to call this process 'veterinarization of society' (in parallel with the concept of 'medicalization of society'). However, this process seems at odds with the self-perception of the veterinary specialists described by many researchers as feeling marginalised, undervalued and powerless, in constant comparison with human medicine doctors. How can we explain this paradox? And, how widespread is this professional self-perception globally? We suggest that surprisingly little is known about the veterinary profession on the global scale as most studies and surveys have strong Euro-American bias. Hence, we argue for comparative veterinary anthropology that would ask who is veterinary expert in transcultural perspective and thus to 'provincialize' the seemingly universal expert system, showing that it is one of many by exposing its historicity, limits and also past and present competitors. We propose that veterinary anthropology should first, symmetrically treat ideas, practices and practitioners dealing with animal health and illness regardless of where they are standing vis-à-vis the western bio-veterinary medicine in its current form. Second, pay detailed attention to the processes of globalisation of western style bio-veterinary medicine and its effects on the socio-ecologies of human-animal relations. Third, to cultivate sensitivity to dissent knowledges and practices that thrive in the so-called west that can be called complementary and alternative veterinary medicine (CAVM) and see them as indispensable part of the more-than-human lived world of animal health and illness.

Dr Angela Cassidy (University of Exeter)

Veterinary Expertise Within Government

This paper contributes to wider questions of how veterinary expertise is changing by focusing upon the roles played by vets within the UK government. It will do this by providing an overview of these roles, the government structures in which they have been located, and how this has changed since their creation during the second half of the nineteenth century. I argue that these roles can be better understood by

contextualising veterinarians as one part of a wider constellation of experts within government: doing research, setting standards, implementing policy, acting as regulators and advising ministers. The longstanding controversy over whether to cull wild badgers to control bovine TB in cattle will then be used to investigating government vets in this context. The badger/bTB controversy has involved shifting alliances between policymakers, politicians and multiple forms of expertise in the 'backstage' of government and the 'frontstage' of the wider public sphere – both domains which have themselves changed radically over the past fifty years. Thinking about government vets in interaction and - at times opposition to - other government experts, helps to identify shared challenges for many professions working within and interacting with the 21st century state. Such challenges include professional rivalries, re-organisation, privatisation, and consequent lack of institutional memory: in turn this enables a broader analysis of potential solutions. Finally, contextualising government veterinarians in this way helps to draw out the more unique features and challenges of veterinary expertise itself, helping the profession reflect more effectively upon its own roles and how they are changing.

Dr Nicolas Fortané (INRAE, Paris-Dauphine University)

Between medical and economic activity: veterinary expertise reshaped by AMR?

Over the past 10 years, veterinarians have drastically reduced their prescription of antibiotics in order to contribute to the fight against antimicrobial resistance (AMR). They generally argue that their professional expertise has shifted towards preventive approaches to animal health that are less relying on antimicrobial use (AMU). First, this evolution transforms veterinarians' practices from a medical perspective: new tools, forms of knowledge and professional roles emerge in veterinary activity that could be described as a process of protocolization of care. Second, this trend also transforms veterinarian's practices from an economic perspective: new business models for veterinary activity are necessary to support the development of these preventive services. In total, we observe a profound transformation of the veterinary profession that starts to be dominated by large corporate groups able to support and sometimes drive this medical and economic shift of veterinary expertise. This paper is based on a study of French veterinarians specialized in pig and poultry production.

Alison Skipper (King's College London)

Contesting the canine body: veterinary expertise and dog breeding

Specialist canine veterinarians and organised pedigree dog breeding arose hand-in-hand in late Victorian Britain. Selective breeding reshaped dogs into a fashionable commodity, thereby stimulating the growth of canine veterinary expertise as a lucrative niche in a profession otherwise focused on horses. Yet most veterinarians had little skill or interest in treating dogs and were critical of dog breeding practices: breeders were often similarly dismissive of mainstream veterinary expertise. In the mid-twentieth century, however, new legislation and new attitudes to animal welfare transformed the veterinary professional landscape. Canine medicine developed rapidly, encompassing new diseases and technologies. Leading clinicians publicly criticised the physical exaggerations produced by selective breeding and campaigned for reform, vigorously opposed by enraged breeders who denied their right to pass judgement on such matters.

Today, companion animal work dominates the veterinary sector, providing highly sophisticated services to support canine health. Veterinarians increasingly assume that professional expertise confers and implies the moral authority to challenge problematic dog breeding practices. But breeders vary enormously in their motivations, ethics and knowledge. Indiscriminate veterinary criticism, exacerbated by the factionalism of social media, contributes to the mutual distrust between vets and breeders. I argue that productive veterinary outreach requires nuanced engagement which acknowledges differing agency and expertise within breed communities. Veterinary expertise must expand to include the human factors in dog breeding if it is to shift these cultures towards better canine welfare.

Day 2: 12.45-13.45 Session 2: How does veterinary expertise become contested?

Dr Alistair Anderson (University of Nottingham)

Contesting the Spaces of Veterinary Expertise: Veterinary Journeys into Animal Research

Veterinary surgeons occupy a number of expert roles within society. One such role is that of the 'Named Veterinary Surgeon' (NVS) in animal research laboratories in the UK. In this role a veterinary surgeon is beholden to the Veterinary Surgeons Act (1966) as all veterinary surgeons are, whilst also having to navigate accountability to the research establishment license holder under the Animals (Scientific Procedures) Act 1986. This dual responsibility challenges veterinarians' personal and professional identities as they move between spaces of veterinary expertise, exercising professional judgement to reconcile potentially conflicting tensions arising from multiple professional accountabilities.

In this presentation I highlight how some NVSs narratives of their career journeys between different spaces of veterinary expertise reveal particular contestations of the ethical contexts in which veterinary expertise is applied. Veterinarians rarely graduate straight into NVS roles, and along their career journey have experience of other roles in contexts such as small animal veterinary practice, farm animal veterinary practice, and government roles. Examining NVSs' reflections on these journeys and on their work in animal research laboratories can help us to understand not only the complexity of the NVS role itself, but also some of the fundamental challenges facing the wider veterinary profession.

Dr Gareth Enticott (Cardiff University)

*Careful Epidemiology and Evolving Disease Ecologies:
Contesting Veterinary Expertise in Bovine Tuberculosis*

In this paper I consider the changing nature of veterinary epidemiology in the management of bovine tuberculosis in the UK. Epidemiology represents a distinct way of seeing, knowing and controlling disease, practices which are connected to what it means to be a vet. However, veterinary epidemiology is not a uniform practice: it can involve a range of different materialities, practices and revealing its 'messy reality' and the work required to make epidemiology 'matter'. Focusing on practices of epidemiological record keeping and mapping, I argue that veterinary epidemiology arranges different spatialities, materialities, and subjectivities in order to enact the presence of animal disease. Tracking the changes to these arrangements over time, reveals the challenges to veterinary expertise and identity. In doing so, however, I show how vets can resist new formalised versions of epidemiological practice. A central theme to these negotiations is an attempt to accommodate complexity by employing a caring and/or careful approach to epidemiology, as revealed through the practices of 're-recording' and 're-mapping'. This demonstrates the contextual and in-situ nature of epidemiology, highlighting how a caring/careful epidemiology matters to disease management and veterinary identity.

Professor Pru Hobson-West (University of Nottingham)

Constructing and contesting veterinary vaccines

Vaccines represent a key technology in public health policy and medical practice, and are heavily imbued with a narrative of success and a narrative of hope. However, social scientists have studied examples of organised vaccine resistance, where critical ideas coalesce. This presentation will focus on the less studied arena of veterinary vaccine resistance. Building on a documentary analysis of critical materials from the UK pet vaccine field, three arguments are presented. First, the paper will identify key similarities in the discourses of vaccine critical

groups in both human and veterinary medicine. Second, I argue that, despite appearances, this critique is actually in line with wider trends in human and animal medicine. Finally, I aim to demonstrate that the topic of vaccine resistance can function as a useful case study for the burgeoning field of veterinary sociology and veterinary humanities, whose advocates want to blur, challenge or dismantle traditional ways of thinking about health, medicine and patienthood.

Dr Jenny Vermilya (University of Colorado)

Identity, Gender, and Tracking: The Reality of Boundaries for Veterinary Students

In this talk I will review key findings from my book “Identity, Gender, and Tracking: The Reality of Boundaries for Veterinary Students.” This book is an ethnography that provides thick description of participant observations that span over four years of fieldwork. I use 42 in-depth qualitative interviews with veterinary medical students to explore the experience of being in an educational program that tracks students based on the species of non-human animals that they wish to treat. Specifically, I examine how tracking produces multiple boundaries for veterinary students. The boundaries between different animal species produce consequences for the treatment of those animals; this has been well documented. Using a symbolic interactionist perspective, my research extends the body of knowledge on species boundaries by revealing other consequences of this boundary work. For example, I analyze the symbolic boundaries involved in the gendering of animals, practitioners, and professions. I also examine how boundaries influence the collective identity of students entering an occupation segmented into various specialties. The collective identity of veterinarian is one characterized by care, thus students have to construct different definitions of care to access and maintain the collective identity. The tracking system additionally produces consequences for the knowledge created and reproduced in different areas of animal medicine, creating a system of power and inequality based on whose knowledge is privileged, how, and why. Finally, socially constructed boundaries generated from tracking inevitably lead to cases that do not fit. In particular, horses serve as a “border species” for veterinary students who struggle to place them into the tracking system. I argue that border species, like other metaphorical borders, have the potential to challenge discourses and lead to social change. What I came to observe was that veterinary students operate within larger structures that shape their own understandings of their professional identities, their gendered roles, the knowledge they hold, and the animals they attend, ultimately learning how to construct boundaries around each. Boundaries that they constantly work to draw, maintain, and even sometimes cross.

Day 2: 15.00-16.00 Session 3: What ethical dilemmas emerge from contested veterinary expertise?

Dr Carol Gray (Hartpury University)

Exploring veterinary end-of-life conversations: who is the expert?

The decision for euthanasia of a companion animal is one that is faced by many animal caregivers, and one that is usually made in conjunction with other people involved in caring for the animal.

This paper will examine how euthanasia decisions are made, while considering the triadic relationship of caregiver, veterinary healthcare provider and animal patient and making reference to the legal and ethical constraints that influence the decision.

The decision for euthanasia is primarily instigated by one party, either the caregiver or the veterinary professional, but there are many aspects of the conversation surrounding the decision that could be usefully unpacked. Such conversations are usually difficult to access, so a recent study of euthanasia consultations as documented in Electronic Health Records provides an opportunity to examine cases involving disagreement between the two decision-makers involved, and to explore the reasons for failing to agree on the decision for euthanasia. These reasons include timing, the wish to involve other people and the desire to continue treating the animal patient.

Possible adverse effects of delayed euthanasia will be discussed, considering quality of life and the potential to cause harm, and a collaborative approach to end-of-life decision-making that may alleviate some of these potential problems will be suggested.

Dr Franck Meijboom (Utrecht University)

Ethics at last. On some recent developments in veterinary medicine and the impact on ethical questions at the end of animal life.

Veterinarians are trained to protect and improve the health and welfare of animals. A duty that is also reflected in many codes of conduct. From this perspective the death of animals is often perceived as a sensitive and uncomfortable theme (e.g., Quain, 2021; Hartnack et al 2016). At the same time, making decisions at the end of animal life and killing animals are for most veterinarians part of their daily practice. As a result, the end of animal life is a central theme in veterinary medicine that raises many questions with a clear ethical component. This has been

widely acknowledged (e.g., Cholbi, 2017; Rollin, 2011; Yeates, 2010).

Nonetheless, it is important to keep reflecting on this because of some recent developments in the veterinary profession that have a direct impact on situations at the end of animal life. These developments include, among others, the move towards preventive medicine, the attention to collectives of animals next to individual care and trends in the societal evaluation of the moral position of animals. This developing context requires veterinarians to reflect on their roles and responsibilities in cases when a decision about the end of animal life is needed.

In the presentation, I (a) show how some recent developments in veterinary medicine influence questions at the end of animal life, (b) discuss the related ethical dimensions and (c) explore how veterinarians can deal with this changing situation when confronted with end of life questions.

Professor Kate Millar (University of Nottingham)

Ethical Conflicts in Veterinary Practice and the Role of the Veterinarian: Examining Principles, Ethical Tools and Spaces.

Veterinarians face a wide range of significant ethical issues and so how they construct, advise and propose solutions to these ethical issues can result in tensions between themselves and key stakeholders. These tensions can result from different perspectives on what is deemed to be the right, the good or what is fair for the animal patient, the client, the profession or wider society. When veterinary expertise is in play, different value-informed constructions of concepts such as wellbeing, consent, risk, transparency and responsibility all affect the role of the veterinary professional and the way in which the veterinarian's professional advice is received.

Veterinary expertise can be perceived as about the medicine only, the facts, but expertise and expert opinion presented by veterinarians comprise ethical values and ethical statements. Therefore one of the roles of those working in the social sciences and humanities is to help veterinarians understand the ethical roles that they take. More work is needed to (i) raise awareness of the nature of the ethical issues raised, (ii) provide interdisciplinary knowledge on these value-based conflicts, (iii) develop ethical tools to support affected veterinarians and (iv) identify spaces that can support reflexivity related to the ethical issues and dilemmas faced in veterinary practice. This paper will explore these four elements with the aim of highlighting the value of insights that are derived from the field of veterinary ethics.

Dr Svenja Springer (University of Veterinary Medicine, Vienna)

The Ethical Challenges of Under- and Overtreatment in the Context of Modern Small Animal Practice

In recent years, small animal practice experienced enormous advancements that enable veterinarians to provide optimal patient care. However, decision-making is influenced by further factors related to the client such as emotional attachment to the animal or financial resources. These factors may lead to the challenges of under- and overtreatment, either because clients refuse recommended therapy or because they want to pursue treatment that goes beyond veterinarians' recommendation. It is the aim of the presentation to examine what factors can lead to the issues of under- and overtreatment by presenting results of a questionnaire study that investigated Austrian, Danish and UK veterinarians' experiences with these challenges (N=648).

Findings indicate that veterinarians are significantly more likely to encounter clients who refuse treatment. In this context, clients' financial limitation and their fear that the animal will not tolerate the treatment may lead to refusal and thus, to the challenge of undertreatment. In addition, findings show that Danish and UK veterinarians with a higher interest in advancing medicine and a lower percentage of insured dogs are more likely to be confronted with clients' refusal. Turning to the problem of overtreatment, results suggest that clients' emotional attachment to their animal or coverage by health insurance have an effect on their wish to go beyond recommended therapy.

Based on these findings, I conclude that the challenges of under- and overtreatment are underpinned by a great complexity including not only factors related to the client, but also to the veterinarians themselves and structural developments of the profession.

Day 3: 12.45-13.45 Session 4: What are the prospects for social research into veterinary expertise

Professor Jane Desmond (University of Illinois at Urbana-Champaign)

Prospecting for Impacts: Who might benefit from the Veterinary humanities/social science Research?

In this presentation I transpose the panel's guiding question of "what are the prospects for social research into veterinary expertise?" into the unstated underlying question of "why research veterinary expertise?" and "to whom might it make it difference?" To which humans and which non-human animals? Panelists in the preceding three sessions will demonstrate the exciting types of new knowledge we might gain through such work, and here I reflect on the potential impacts of such knowledge on veterinarians, on veterinary

education, and ultimately on the health and welfare of non-human animals. I ask whether such knowledge is actually desired within the veterinary field, and if so in what arenas. I suggest that the human health humanities impact on human medical training may be overstated, at least in the U.S., and may not provide a good model for us. Finally I ask the crucial question of where such knowledge production might most effectively be located--in humanities or social science departments? In colleges of veterinary medicine? In centers for human-animal studies? In health humanities programs? In public think tanks with policy implications? I suggest that the underlying goal of the veterinary humanities is at least in part to improve the lives of animals and ask how the complexity and variability of that task and that concept may best be served in the development of an emerging field of veterinary humanities.

Dr Kerstin Weich (University of Vienna)

Shifting emphasis in medicinised societies

Although the institutional separation of the medical field into two medicines – human medicine and veterinary medicine – follows the species border, veterinary humanities do not rely on such a distinction. Veterinary humanities are not about ‘animal medicine/health’, but about reiterating that medicine does not adhere to biological orders. Thus, the marginalization of animals in contemporary medical discourse, the institutional separation of the medical field along the species border, is not trivialized, but put forward as an object of research. Empirical and reflexive engagements of veterinary humanities situate medical meaning- and world-making explicitly below the species line.

The still nascent veterinary humanities challenge the understanding of modern medicine as social medicine by literally bringing animals into the medical picture: veterinary settings are inhabited by animal patients, who resist the exclusion or instrumentalization of non-human life in the context of (human) medicine, power and politics. Conceiving medicine as social medicine rejects the notion of medicine as individualized and patient related; conceiving the medical ‘social’ in a more/other-than human perspective rejects an anthropocentric understanding of the medicinised society. In contrast to ‘medicalisation’, the term ‘medicinisation’ indicates a consistent concept of social medicine, which requires a work *inside* the intertwined medical and social discourse. Thus, the distinction between medicalised/false and therapeutical/right medicine gives way to a political-ethical engagement within medicinised societies – which, given their current ecological challenges, is especially called for.

Dr Lisa Moses (Centre for Bioethics, Harvard Medical School)

Can the Humanities Save Veterinary Medicine? A practitioner's (and ethicist's) perspective

Veterinary medicine has been ineffectually grappling with negative impacts on practitioner mental health for a long time. The well-known personal toll of these problems includes depression, burnout, premature retirement, and high suicide rates. It is reasonable to suppose that the situation is similar for veterinary paraprofessionals. It's also easy to see how these harms could contribute to a growing shortage of veterinarians and veterinary nurses.

Veterinary medicine has largely considered these problems to be an individual rather than a systemic issue. However, a focus on individuals and "wellness" ignores systemic causes of the problems, such as moral distress from frequent ethical conflict, and fails to provide a robust pathway to repairing the problems. Research on ethical conflict in veterinary medicine (Moses, Malowney, and Wesley Boyd 2018) suggested that many veterinarians have limited knowledge of ethics and haven't had an opportunity to develop a moral imagination. The same research revealed that exposure to ethical conflict (such as euthanasia for reasons of financial constraints) is so frequent that it isn't recognized as ethical in nature. Mental health professionals and bioethicists believe that a moral imagination allows recognition of ethical dilemmas and can reduce moral distress.

Could a deeper incorporation of the humanities in veterinary education and practice culture change this? And would those same changes promote a new focus on animal ethics and empathy? The humanities might be an important conduit to a new way forward for veterinary medicine.

Professor Melanie Rock (University of Calgary)

Exploring moral distress amongst veterinarians who care for poor people and their pets in multi-species communities

Veterinary professionals have ethical and legal obligations towards humankind, not just towards other species. Even so, investigations into medico-legal borderlands have yet to focus on veterinary expertise. This presentation centers on outreach clinics made possible by a partnership between an urban charity and a veterinary school. Social research has informed this service-learning initiative, from the outset. Most recently, members in our interdisciplinary team interviewed clients, charity staff, and participating veterinarians. Next, the interview guides structured an analytic matrix. That matrix, personal reflections, relevant scholarship, and team discussions led to a thematic analysis. The clients, the social-service providers, and the veterinary-service providers differed in their views. The social-service providers praised the veterinary-service providers' commitment to partnership. As for clients, they

consistently reported feeling valued at the outreach clinic, and they spoke of their pets as family members. Some clients spoke about difficulties with staying connected to family members, including pets; and some raised concerns about financial barriers to veterinary expertise, in general. The veterinarians, meanwhile, expressed angst and sorrow. Social-service providers and social researchers must seriously consider veterinarians' moral distress, as a social problem. Only then might multi-species publics become powerful enough to redress the root causes of the ethical quandaries that confront poor people with pets, and that can arise when professionals care for marginalized multi-species families and communities.

Biographies

Dr Alistair Anderson (University of Nottingham)

Dr Alistair Anderson is a Research Fellow at the University of Nottingham based in the School of Sociology and Social Policy, and a co-convenor of the *Constructing Veterinary Expertise* conference. His background is in health geography with an interest in interspecies health topics, and he is a member of the Royal Geographical Society's Geographies of Health and Wellbeing Research Group committee. In his research, Alistair applies mixed quantitative and qualitative methods.

Alistair's PhD, undertaken in the School of Geographical Sciences at the University of Bristol, examined attitudes and behaviours around antibiotic use by pet-owners in parallel across both medical and veterinary contexts. During his PhD, Alistair authored a briefing for the House of Lords Library on possible impacts of Brexit on antimicrobial resistance in the UK, and co-authored written evidence to the House of Commons Health and Social Care Committee's Inquiry into Antimicrobial Resistance.

Following his PhD, in June 2020 Alistair became a postdoc at the University of Nottingham with the Wellcome Trust-funded Animal Research Nexus Programme (AnNex). Whilst working on AnNex, Alistair analysed qualitative data covering the perspectives and experiences of Named Veterinary Surgeons working in animal research laboratories. From this work, which is ongoing, Alistair has co-authored multiple academic outputs as well as a contribution to the Animals in Science Committee's 2021 horizon scanning exercise.

In June 2021 Alistair joined the VAX-TRUST consortium – a seven-country Horizon 2020-funded project using qualitative methods to research parental hesitancy around childhood immunisation and the role of healthcare professionals in navigating this hesitancy.

Professor Raymond Anthony (University of Alaska)

Raymond Anthony is Professor of Philosophy at the University of Alaska Anchorage. His publications are at the intersection of environmental-animal-veterinary-climate-food ethics and the philosophy of technology. He served as Ethics Advisor for the American Veterinary Medical Association's (AVMA) Animal Welfare Committee (2012-2022) and is a co-author on the AVMA's Euthanasia, Humane Slaughter and Depopulation Guidelines, respectively. Currently, he is Visiting Professor to

Universidade Estadual de Londrina, Brazil, where he and his colleagues at the Grupo Bem-Estar Animal e Sustentabilidade are conducting values-aware research that explores challenges to the sustainability of the dairy chain in Southern Brazil. Also, over the next couple of years, he is the PI on an USDA - National Institute of Food and Agriculture sponsored project titled, *Wellanimal - Promoting Farm Animal Welfare And Preparing For The Next Novel Pandemic*. One of the objectives of the project is to lay the groundwork for the development of a collaborative agenda for value-aware practice and research for animal welfare science and ethics within One Health post-COVID-19. Professor Anthony is Associate Editor for the International Library of Environmental, Agricultural and Food Ethics (LEAF) Series, Springer.

Dr Angela Cassidy (University of Exeter)

Angela Cassidy is a Senior Lecturer in Science and Technology Studies, located in the Centre for Rural Policy Research at the University of Exeter. Following an early training in zoology, she migrated disciplines as a postgraduate and now works at the interfaces of history and social studies of science, environment and medicine. Her research interests encompass public knowledge controversies; science, expertise and policy; interdisciplinarity; and human-animal-environmental relations. Much of her research explores how scientific knowledge is produced, communicated, interpreted and contested: within academia, in governance contexts and across the wider public sphere. She has investigated this process through a series of case studies, including 'One Health' (the convergence of human and animal health); food risk; and popular evolutionary psychology.

She has recently completed a longstanding research project documenting the history of bTB in the UK and the ongoing controversy over whether to cull wild badgers to control the disease in cattle, which has been ongoing for over fifty years. This case has seen repeating cycles of policy formation, implementation, and controversy: my research sheds light on the persistence of such cycles, the importance of personal and elision of institutional memories. Her current research is developing these themes of knowledge, values, and memory: in work on the history of pest control, animal feeding and shared health; also in a second project investigating biodiversity research collaboration in past and present – across disciplines, with other professionals, enthusiasts and wider publics.

Professor Jane Desmond (University of Illinois at Urbana-Champaign)

Jane C. Desmond is Professor of Anthropology and of Gender/Women's Studies at the University of Illinois at Urbana-Champaign, U.S.A., where she heads the campus-wide Human-Animal Studies@Illinois initiative and serves as affiliate faculty in the College of Veterinary Medicine. The author/editor of five books, she is a specialist in performance studies, human-animal studies, and transnational studies of the United States, and has served as past-President of the International Studies Association. She is the founding Editor of the Animal Lives book series at the University of Chicago Press, and founding Resident Director of the UIUC-ASI Summer Institute in Animal Studies. Her most recent solo book, *Displaying Death and Animating Life: Human-Animal Relations in Art, Science and Everyday Life* (Chicago, 2016) explores topics as diverse as natural history museums, pet cemeteries, roadkill, and art by animals. Her current book project, tentatively titled *Medicine Across the Species Line*, examines the cultural dimensions of contemporary U.S. veterinary medicine based on several years of fieldwork. A recent piece on knowledge and value in veterinary medicine appears in *Frontiers in Veterinary Medicine*. In addition, her

public writing on animals has appeared in major national US publications like Newsweek, Scientific American, and the Washington Post, among others. A former professional modern dance choreographer, she holds a Ph.D. in American Studies from Yale, and has held faculty appointments at Cornell University, Duke University, Eotvos Lorand University in Budapest, the University of Iowa, and Georg-August Universität in Göttingen, Germany where she is currently a 2022 Fulbright Professor.

Dr Gareth Enticott (Cardiff University)

Dr Gareth Enticott is a Reader in Human Geography at Cardiff University. His research focuses on biosecurity and animal disease surveillance and management. Dr Enticott is an expert in the ongoing controversy in the UK surrounding bovine Tuberculosis in cattle and badgers and has advised the UK government on the role of social research in helping the management of the disease. His research has also focused on the management of bovine Tuberculosis in New Zealand. Specifically his research has focused on farmers' behaviour; farmers' beliefs about disease transmission; and the impact of government attempts to change farmers' biosecurity behaviour. He has also examined reforms to the veterinary profession and their effects on disease management including the use of diagnostics, and the migration of veterinary surgeons to the UK and New Zealand.

Dr Nicolas Fortané (INRAE, Paris-Dauphine University)

Nicolas Fortané is a sociologist at the French Research Institute for Food, Agriculture and the Environment, based at Paris-Dauphine university. He's leading the AMAGRI research group (<https://www.amagri.eu>) which is working on the transformation of the veterinary profession and the veterinary drug market in relation with AMR policies.

Dr Carol Gray (Hartpury University)

Dr Carol Gray is a veterinary surgeon who spent 15 years in clinical practice then moved into academia. After many years as a lecturer in veterinary communication skills at the University of Liverpool, she moved to the University of Birmingham to complete a PhD investigating informed consent in veterinary practice, then moved back to Liverpool to take up a postdoctoral research fellowship in the School of Law, exploring shared decision-making in veterinary practice. She is now Principal Lecturer in Veterinary Nursing at Hartpury University, with responsibility for postgraduate course development and providing research mentorship within the Department. Her research interests include informed consent, shared decision-making and research ethics. She is co-convenor of Veterinary Humanities UK and a member of the RCVS Ethics Review Panel.

Professor Pru Hobson-West (University of Nottingham)

Pru Hobson-West is Professor of Science, Medicine and Society in the School of Sociology and Social Policy, and an Honorary Professor in the School of Veterinary Medicine and Science at the University of Nottingham, UK. Pru holds a MA (Hons) in Politics from the University of Edinburgh, and a PhD and PGCHE from the University of Nottingham. She is based in the Institute for Science and Society and the Centre for Applied Bioethics. In 2019 Pru was also a Visiting Academic at the Department of Sociology, University of Warwick, and was previously a Visiting Fellow at the JFK School of Government at Harvard.

Pru is a sociologist with expertise in teaching science and technology studies, medical sociology and veterinary ethics and professionalism. Her research uses qualitative methods to explore sensitive topics and controversies, including on vaccination and animal research. She also has experience of public, media and stakeholder engagement. Pru's current funded projects include the Animal Research Nexus Programme (2017-2023) funded by the Wellcome Trust, and VAX-TRUST, an international programme focused on vaccine hesitancy and funded by EU Horizon 2020 (2021-2024).

Professor Hobson-West is co-convenor of the Constructing Veterinary Expertise conference, as part of her dual vision to encourage both more social scientific study of veterinary medicine, and greater engagement of veterinary medicine with social scientific theory and methods. Pru has significant experience of supporting staff and students working on highly interdisciplinary projects, and those wishing to transition into social science.

Dr Franck Meijboom (Utrecht University)

Franck L.B. Meijboom studied theology and ethics at the Universities of Utrecht (NL) and Aberdeen (UK). As Associate Professor he is affiliated to the Faculty of Veterinary Medicine of Utrecht University, the Ethics Institute of Utrecht University (Faculty of Humanities) and the Adaptation Physiology group (ADP) of Wageningen University. Additionally he is Head of the Centre for Sustainable Animal Stewardship (CenSAS). At the Faculty of Veterinary Medicine is member of the Departmental Board (Population Health Sciences, manager research) and member of the Research Council.

His fields of interest are in ethics of animal use and veterinary ethics, in agricultural and food ethics, and the role of public trust and debate in these domains. As a researcher and project leader, he has been involved in national and European funded research concerning topics such as Ethics of animal welfare, Ethical aspects of the use of technologies for sustainable animal breeding, Ethics of Precision livestock farming and Ethical dimension related to end of animal life questions.

As lecturer, he is responsible the bachelor and master teaching in ethics and law at the faculty of Veterinary Medicine at Utrecht University. Furthermore, he is co-coordinator of the Master course "Sustainable World" that is part of the Master in Applied Ethics (Ethics Institute), involved in ethics teaching for life science students and developed an online course in Ethics of Animal Welfare.

Professor Kate Millar (University of Nottingham)

Kate Millar is Professor of Applied Bioethics in the School of Biosciences and School of Veterinary Medicine and Science, University of Nottingham. She is Director of the Centre for Applied Bioethics and a member of the Institute for Science and Society. In 2019, she was appointed a visiting academic at the College of Medicine, University of Malawi, and she is currently working (2022) as a visiting researcher at NORCE in Tromsø, Norway

Kate's field of research is bioethics and technology assessment, with a particular interest in veterinary and agri-food ethics and research ethics. Her research has focussed on the development and application of ethical frameworks (e.g. Ethical Matrix, Real-time Research Ethics Approach), stakeholder participation and inclusive

innovation methods (e.g. 'Ethics in Research' Cards). Kate has published on veterinary and agri-food ethics, engagement methods, RRI, and integrated technology assessment. Kate is President of the European Society for Agricultural and Food Ethics (EurSafe) and a founding member (2011) of 'APSafe', a network linking researchers working on animal and agri-food ethics across Australasia. She is on the Editorial Board of Food Ethics. Kate has successfully delivered UG and PG bioethics modules and she is passionate about developing different forms of professional ethics training. Kate's current work is funded by Bill and Melinda Gates Foundation, BBSRC, EPSRC, EU H2020, and the UK Charity, FRAME.

Professor Millar is a co-convenor of this conference on 'Constructing Veterinary Expertise'. This event fits with Kate's wider interest and support for interdisciplinary and transdisciplinary work.

Lisa Moses (Centre for Bioethics, Harvard Medical School)

Lisa Moses is a veterinarian and animal focused bioethicist. After nearly 30 years as a practicing veterinary specialist for the Massachusetts SPCA- Angell Animal Medical Center in Boston, Dr. Moses became a faculty member at Harvard Medical School's Center for Bioethics. Dr Moses is the chair of both the Animal Ethics Study Group at Yale's Interdisciplinary Center for Bioethics and the Harvard-Yale Animal Ethics Faculty Seminar, is a senior advisor at The Hastings Center, and she holds a visiting scientist appointment at The Broad Institute of MIT and Harvard. She completed a fellowship in bioethics at the Harvard Medical School Center for Bioethics and received her veterinary degree from the University of Pennsylvania. She also holds faculty appointments at The Cummings Tufts School of Veterinary Medicine and at Case Western Reserve University School of Medicine.

Dr. Moses teaches and studies various aspects of veterinary medical and animal conservation ethics, most recently concentrating on research ethics where animals are both the subject and beneficiary of research investigations. Her current work includes animal research ethics in novel conservation technology like xenotransplantation, cloning, gene drive, and comparative genomics along with futile care and moral distress in veterinary practice.

Melanie Rock (University of Calgary)

Professor Melanie Rock is a medical anthropologist and a social worker. As a postdoctoral fellow in public health, she aligned her studies with social justice, especially for Indigenous communities and in urban areas. Upon joining the University of Calgary in 2003, she immediately began to develop a research program in human-animal studies and One-Health promotion. At the University of Calgary, Professor Rock's primary appointment is in Medicine, with the Department of Community Health Sciences; and she holds honorary appointments in Arts, Social Work, and Veterinary Medicine. In addition, Professor Rock is part of the Hotchkiss Brain Institute, the O'Brien Institute for Public Health, and the One Health research strategy at the University of Calgary. Professor Rock also serves on the External Advisory Board for the Wellcome Centre for Cultures + Environments of Health at the University of Exeter, and on the Multi-Species Dementia International Research Network, spearheaded at the University of the West of Scotland, initially with funding from the Wellcome Trust and now with funding from the Royal Society of Edinburgh. Professor Rock has held several awards from the Social Sciences and Humanities Research Council of Canada (SSHRC), beginning in 1997 with a 4-year doctoral

scholarship. Professor Rock has also received funding from the Canadian Institutes of Health Research (CIHR).

Alison Skipper (King's College London)

Alison Skipper is a veterinary surgeon with over thirty years' experience in first opinion small animal practice. She is a co-founder and co-convenor of two successful community networks, Veterinary Humanities UK and the Animal History Group. Alison has recently completed a PhD at King's College London, funded by the Wellcome Trust, on the history of breed-related disease in pedigree dogs, and has communicated her research to a wide range of academic and public audiences through presentations, articles, publications and the mainstream media. She has extensive and longstanding practical involvement with many aspects of pedigree dog health work, and serves on various expert committees and advisory groups in this sector.

Dr Svenja Springer (University of Veterinary Medicine, Vienna)

Svenja Springer graduated in Veterinary Medicine from the Vetmeduni Vienna in 2014, focusing on laboratory animal science. From 2014 to 2018, she was doctoral candidate and scholar at the Unit of Ethics and Human-Animal Studies at the Messerli Research Institute in Vienna. In her doctoral thesis, Springer investigated attitudes and beliefs of Austrian veterinarians towards euthanasia and explored moral challenges in light of her empirical study. From 2017 to 2022, Svenja Springer was enrolled in a double PhD program at the University of Copenhagen. As part of this PhD program, she worked on the research project *The Internal Morality of the Veterinary Profession: An Empirically Informed Ethical Analysis of Modern Small Animal Practice*. This project focused on an empirical investigation of ethical challenges that emerge due to various developments and advancements in small animal practice including the examination of pet health insurance, the use of internet resources in the veterinary context as well as veterinarians' decision ethics orientations during clinical consultation.

Svenja Springer has been a university assistant at Unit of Ethics and Human-Animal Studies at the Messerli Research Institute in Vienna since 2021. She is currently working on an international project on pet owners' expectations of modern small animal practice. Further, she received a funding for research project to empirically investigate the growing field of hospice and palliative care in small animal practice.

Dr Jenny Vermilya (University of Colorado)

Dr. Jenny Vermilya is an Assistant Professor, Clinical Teaching Track in the Sociology Department at the University of Colorado Denver. Her last position was as an Assistant Professor in the Department of Sociology and Human Services at the University of North Georgia. Dr. Vermilya's expertise and professional interests center on gender and professions, symbolic interactionism, qualitative methods, and animals and society. She has co-authored an article in *Gender & Society* on the feminization of veterinary medicine and has written solo on horses as a "border species" in the journal *Society & Animals*. Her guest blog on the horse slaughter controversy in the U.S. appeared in *Psychology Today's* blog "Animals and Us: The Psychology of Human-Animal Interactions." Her co-authored research on police shootings of dogs appeared in a special issue reprint book "We Are Best Friends:

Animals in Society” published by *MDPI Books*. Most recently her first book “Identity, Gender, and Tracking:

The Reality of Boundaries for Veterinary Students” was published in 2022 by *Purdue University Press*. *Animals & Society* is an elective sociology course that Dr. Vermilya has added to the sociology offerings at each of the institutions where she has taught. Coming to Denver has been a return to Colorado for Dr. Vermilya who earned her doctorate from the University of Colorado Boulder in 2015.

Dr Kerstin Weich (University of Vienna)

Dr. Kerstin Weich, PhD, is a philosopher and a veterinarian with special qualification in animal welfare. Her work crosses medical philosophy, veterinary science, ethics and animal studies. Kerstin holds a PhD in philosophy for her research project *Towards a Philosophy of Veterinary Medicine* and a doctorate in veterinary medicine for her work on *Care and Critique. An intervention in laboratory animal ethics*. She started in 2013 at the Messerli Research Institute in Vienna as Key Researcher of the third party funded project *VEthics for Vets – Ethics in Official Veterinary Practice*, resulting in the book *Ethics in Official Veterinary Practice. A guideline and a follow-up project on didactics for veterinary ethics*. She designed a basic teaching course in applied ethics for veterinary students, which she has been teaching since 2016, while also teaching ethics in equine medicine and lab animal sciences. Kerstin initiated the first global Network for Veterinary Humanities as well as a German-speaking Network for Veterinary Ethics. She was a research fellow at the Wellcome Center for Cultures and Environments of Health at the University of Exeter, GB, and at the Oslo School of Environmental Studies at the University of Oslo, Norway.

Kerstin is Associate Editor of *Frontiers in Veterinary Science*, editor of the peer-reviewed, OA journal *Humanimalia*, and co-editor of Special Issues on veterinary medical ethics (*FoodEthics*, *BMTW*), veterinary anthropology (*Frontiers*) and interspecies relationality (*Society&Animals*).

Professor Abigail Woods (University of Lincoln)

Abigail Woods started her career as a veterinary surgeon in small animal practice before returning to university to take MA and PhD degrees in the history of science, technology and medicine. She is currently Pro Vice Chancellor / Head of College of Arts at the University of Lincoln. Before joining Lincoln in 2020 she worked at King's College London (where she was Head of the Department of History, 2016-2020), Imperial College London and the University of Manchester. Her research focuses on the history of animals, animal health, livestock agriculture, and the zoological aspects of human medicine. She is author of *A Manufactured Plague: A History of Foot and Mouth Disease in Britain*, and co-author of *One Health? Animals and the Shaping of Modern Medicine*.